

# **Status of E-906/SeaQuest**

**– an unpolarized fixed-target Drell-Yan experiment**



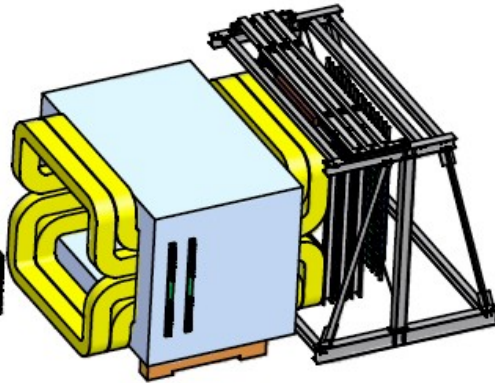
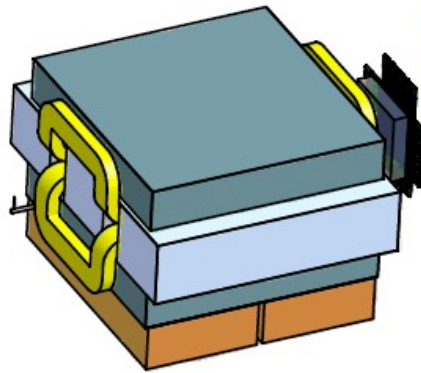
**Markus Diefenthaler (UIUC)**



# Spectrometer Status

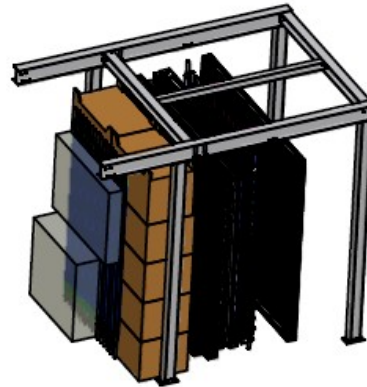
## Updates ✓

D1 repaired ✓



PMT base update ✓

**new D1 built at CU-Boulder**



D3m installed ✓

Target ✓

Magnets ✓

Hodoscopes ✓

Drift Chambers ✓

operational, awaits beam

operational

calibrated with cosmics, operational, awaits beam

operational, await beam,  
change gas adiabatically from Ar:CO<sub>2</sub> to P08:CF<sub>4</sub>

## ORC ✓

Operational Readiness Clearance  
SeaQuest E905  
30 Oct 2013

AUTHORIZATION TO RESUME THE REMOTE OPERATION OF E905 (SeaQuest)

REVIEWED AND APPROVED BY:	DATE
<i>Mark Long</i> Particle Physics Division Head Comments/Exceptions:	10/11/2013
<i>Robert L. Dixon</i> Accelerator Division Head Comments/Exceptions:	10/21/13
<i>Steve Heward</i> Accelerator Division Operations Department Head Comments/Exceptions:	10/21/13
<i>Yany Lantier</i> Accelerator Division Radiation Safety Officer Comments/Exceptions:	31 Oct 13
<i>Ken W. Hylton</i> 13747N Particle Physics Division Radiation Safety Officer Comments/Exceptions:	30 Oct 13
<i>Ken W. Hylton</i> 13747N Particle Physics Senior Safety Officer Comments/Exceptions:	30 Oct 13
<i>Joe Bellantoni</i> Committee Chair Comments/Exceptions:	30 Oct 2013
Submitted By: <i>David Christian</i> Requester P. Reimer (ANL) D. Christian (FNAL)	Nov 1, 2013

1 A signed paper form (copy) of this document will exist in the Particle Physics Division Office. The original signed document will stay with the experiment requesting clearance.

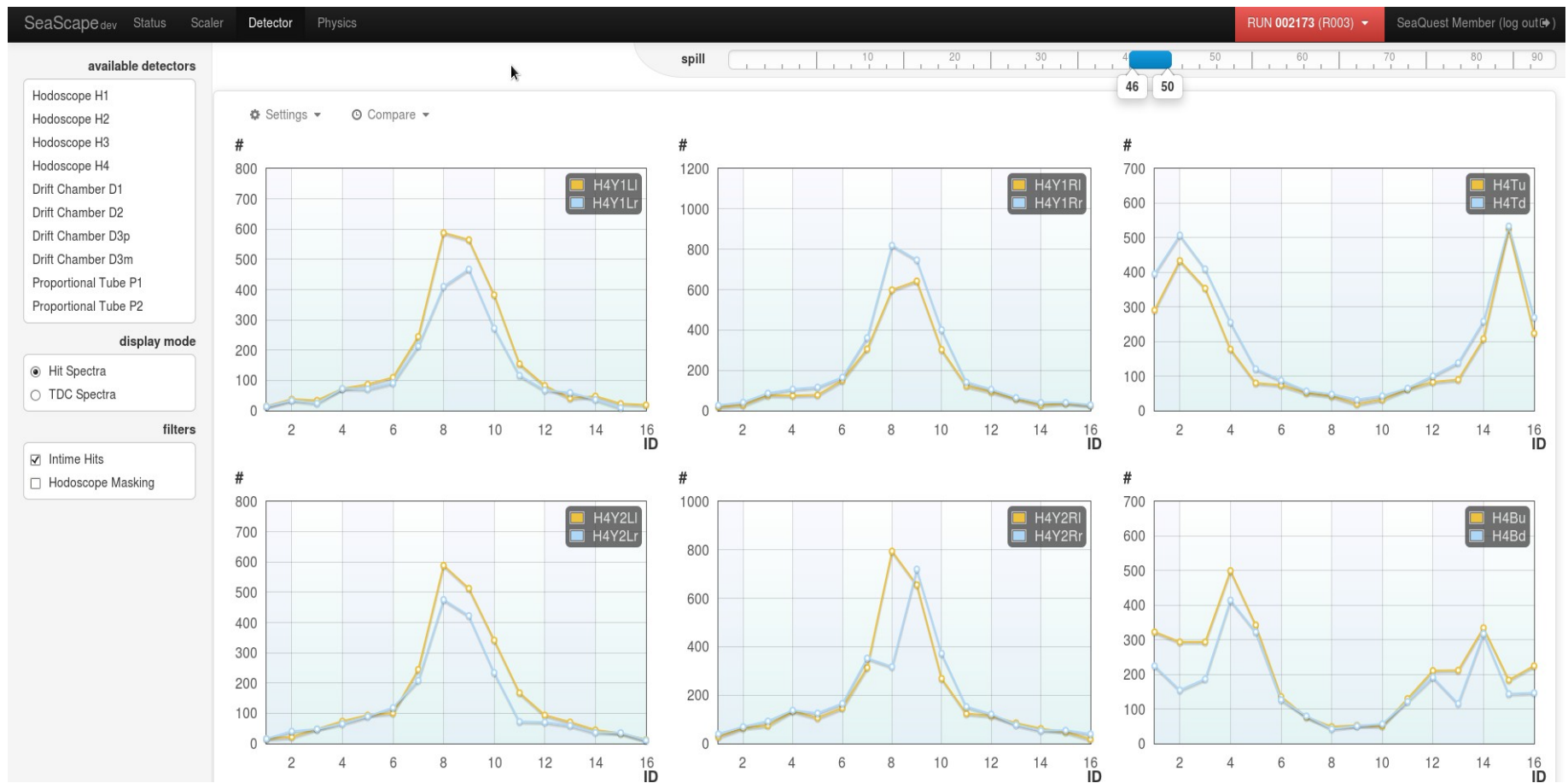
Rev Aug 2008

# DAQ / Trigger Status

- custom-made high-rate **TDCs installed and well tested, await beam**
- L(evel)0, L(evel)1, and L(evel)2 **trigger modules installed and operational**
- readout of L0 trigger modules integrated in mainDAQ
- comprehensive **test of trigger firmware** completed:
  - **100.0% purity** and **100.0% efficiency** found in road pulser tests
- **trigger road selection** optimized for:
  - good DAQ livetime
  - good acceptance rate of Drell-Yan events
  - **ToDo:** restructure trigger firmware generation
- **NIM / FPGA trigger comparison:**
  - under discussion
- **trigger systems await beam**

# Online Monitoring

- **decoder** ✓ : cross checked, improving high-rate capability
- first release of **SeaScape** ✓
- FNAL web server: many thanks to computing division



# Beam Status

- **Main Injector slow-spill extraction** ✓
- **last week's schedule:** commissioning beam by November 4th, i.e. today
- **status of external beam-line for SeaQuest:**
  - vacuum problems in the lab-famous berm pipe  
→ problem with new pipe or its flanges
  - under investigation by accelerator division
- commissioning of **beam-line Cerenkov counter:**
  - bucket-by-bucket intensity measurement
  - improved beam diagnostics
  - will allow for trigger veto

**The E-906/SeaQuest collaboration is looking forward to the commissioning and data taking with the 120 GeV proton beam with a high duty factor!**